

elements selected from the group consisting of carbon, nitrogen, and oxygen at a concentration of 1×10^{19} atoms/cm³ or more,

wherein said region is formed in the vicinity of at least one of said source-channel boundary and said drain-channel boundary.

84. (Amended) A semiconductor device comprising:

a semiconductor layer including a channel region and source and drain regions in contact with said channel region at a source-channel boundary and a drain-channel boundary, respectively;

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween; and

a region having a higher energy band gap than any of said source, drain, and channel regions,

wherein said region is formed in the vicinity of at least one of said source-channel boundary and said drain-channel boundary.

89. (Amended) A device according to claim 84 wherein said region includes one or more elements selected from the group consisting of carbon, nitrogen, and oxygen at a concentration of 1×10^{19} atoms/cm³ or more.

90. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, said driver circuit comprising:

a semiconductor layer including a channel region and source and drain regions in contact with said channel region at a source-channel boundary and a drain-channel boundary, respectively;

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween; and

a region formed in said semiconductor layer, said region containing one or more elements selected from the group consisting of carbon, nitrogen, and oxygen at a concentration of 1×10^{19} atoms/cm³ or more,

wherein said region is formed in the vicinity of at least one of said source-channel boundary and said drain-channel boundary.

96. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, said driver circuit comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region at a source-channel boundary and a drain-channel boundary, respectively;

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween; and

a region having a higher energy band gap than any of said source, drain, and channel regions,

wherein said region is formed in the vicinity of at least one of said source-channel boundary and said drain-channel boundary.

101. (Amended) A device according to claim 96 wherein said region containing one or more elements selected from the group consisting of carbon, nitrogen, and oxygen at a concentration of 1×10^{19} atoms/cm³ or more.

102. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, said driver circuit comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region interposed therebetween; and

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween;

wherein said semiconductor layer has at least one region including carbon and overlapping both a portion of said channel region and a portion of said source and drain regions at a concentration of 1×10^{19} atoms/cm³ or more.

110. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, said driver circuit comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region interposed therebetween; and

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween;

wherein said semiconductor layer has at least one region including nitrogen and overlapping both a portion of said channel region and a portion of said source and drain regions at a concentration of 1×10^{19} atoms/cm³ or more.

118. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, said driver circuit comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region interposed therebetween; and

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween;

wherein said semiconductor layer has at least one region including oxygen and

overlapping both a portion of said channel region and a portion of said source and drain regions at a concentration of 1×10^{19} atoms/cm³ or more.

126. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, each of said pixels comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region interposed therebetween;

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween; and

a region formed in said semiconductor layer, said region containing one or more elements selected from the group consisting of carbon, nitrogen, and oxygen at a concentration of 1×10^{19} atoms/cm³ or more,

wherein one boundary of said region is formed in said channel region and the other boundary of said region is formed in one of said source region and said drain region.

134. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, each of said pixels comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region interposed therebetween;

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween; and

a region having a higher energy band gap than any of said source, drain, and channel regions,

wherein one boundary of said region is formed in said channel region and the other boundary of said region is formed in one of said source region and said drain region.

140. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, each of said pixels comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region interposed therebetween; and

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween;

wherein said semiconductor layer has at least one region including carbon and overlapping both a portion of said channel region and a portion of said source and drain regions at a concentration of 1×10^{19} atoms/cm³ or more.

146. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, each of said pixels comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region interposed therebetween; and

a gate electrode adjacent to said channel region with a gate insulating film interposed therebetween;

wherein said semiconductor layer has at least one region including nitrogen and overlapping both a portion of said channel region and a portion of said source and drain regions at a concentration of 1×10^{19} atoms/cm³ or more.

152. (Amended) A display device having a plurality of pixels and at least one driver circuit for driving said pixels, each of said pixels comprising:

a semiconductor layer including a channel region and source and drain regions with said channel region interposed therebetween; and

a gate electrode adjacent to said channel region with a gate insulating film